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December 17, 2009

Cypress Point ABC 338-7651 Minoru Blvd. Richmond, BC V6Y 1Z3

Attention: Corinne Inglis

Dear Corinne:

RE: Building Envelope Review of Suite 307A

Cypress Point ABC, NW 2050, 7511-7651 Minoru Blvd., Richmond, BC

RJC No.: VAN.037207.0014

#### 1.0 INTRODUCTION

As requested, Read Jones Christoffersen Ltd. (RJC) conducted a review of the building envelope of Suite 307A at Cypress Point. This suite is situated on the north elevation of Building A, which was not included in the building envelope restoration program completed in 2001/2002. The building envelope on this elevation incorporates assemblies constructed approximately 27 years ago.

The intent of this review was for RJC to provide an opinion on the need for restoration of the building envelope assemblies on the north elevation of Building A (between Gridlines D and F).

We completed our review on December 9, 2009. A brief description of the work undertaken by RJC is as follows: 1) Review of know problem areas as revealed to us by the Owner, 2) Review of the wall cavity below the bay window in the bedroom through a 12"x12" opening made in the interior drywall finish.

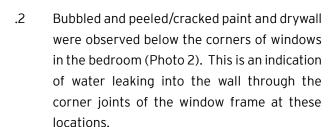
## 2.0 ASSESSMENT OF BUILDING ENVELOPE CONDITION

#### 2.1 Interior

The interior finishes were reviewed in Suite 307A. The areas in poor condition appear to correspond to known problem areas associated with the balcony deck, exterior balcony swingdoor, and windows. Our observations are as follows:

.1 Significant condensation is forming on the interior face of the glass units of the windows and swing-door in the bedroom, and pooling on the sills of the wood-frames (Photo 1). Failed weatherstripping was also observed at the bay window.

The wood frames of the windows are swollen and/or stained from condensation related moisture (Photo 1).



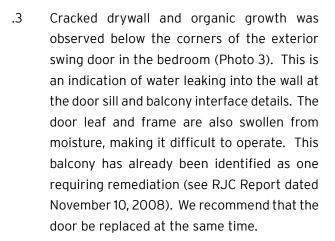




Photo 1



Photo 2



Photo 3

.4 The wall cavity below the bay window in the bedroom was examined for moisture ingress through a 12"x12" cut made in the drywall finish.

Moisture damage of the wood components was observed as seen in Photo 4. This confirms that moisture ingress is occurring at the bay windows, most likely through the window itself as well as between the window and rough opening.

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Moisture content readings of the exterior sheathing and wood-framed stud wall below the bay windows were taken. Readings over 28% moisture content were recorded at areas directly below the windows.

For the purpose of this report, we have classified moisture content readings into 3 categories:



Photo 4

- 1. Less than 19%
- 2. Between 19% and 28%
- 3. Greater than 28%

Wood elements with a moisture content of less than 19% may be considered immune to fungal growth. Between 19% and 28%, fungal growth may be sustained. At approximately 28%, germination and growth of fungal spores can be expected. Above 28%, a substantial increase in fungal growth and associated wood rot can be expected.

Review of the existing polyethylene air/vapour barrier revealed inconsistencies in its application. The polyethylene has not been sealed to the concrete floor slab, allowing for a direct path for air transfer into the interior environment. Cold, moist air could be felt penetrating into the cavity below the bay window as well as at the bottom of the interior walls.

#### 2.2 Exterior

In August 2000, RJC conducted a Building Envelope Evaluation at Cypress Point. At that time, the Owners were made aware that the potential for water penetration and wood deterioration existed with the exterior building envelope assemblies. Areas of severe staining or deterioration were identified at the following locations: 1) underside of mansard roof terminations, 2) along the unprotected vertical edges of the bay window units, 3) below steps in the roof or deck parapet cap flashing, and 4) balcony details. These issues continue to be a concern on the unremediated portion of Building A on the north elevation.

In the 2000 report, RJC also recommended that consideration be given to rebuilding the bay window units, providing proper



Photo 5

drainage and venting mechanisms at each window and floor level. Based on the water damage observed in Suite 307A, the recommendation for rebuilding the bay window units on this elevation is still warranted.

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### 3.0 CONCEPTUAL REPAIR OPTIONS

We understand that the Owner has expressed interest in replacing the bay windows at their own expense in order to improve the level of comfort in the bedroom. As an interim option, the windows could be replaced with new vinyl-framed units with sealed insulated glass. However, these windows will not match the windows installed during the 2001/2002 Restoration Program as this would require removal of the vertical corner posts and structural upgrade of the wood-framed structure.

RJC cautions that care must to taken when installing the new windows and a professional contractor should be engaged to complete this work. Installation of a membrane flashing under and behind the bottom of the window should be incorporated to drain potential water ingress between the window frame and wood-framed rough opening.

As a long-term plan for the north elevation of Building A, RJC recommends that the exterior stucco clad walls and bay window units be restored using current standards of practice and rainscreen technology. Reconstruction of the balcony stack of Units 110/210/307 has been recommended in RJC's Report dated November 10, 2008. It is further recommended that the swing-door located at the bedroom of Unit 307 be replaced during this program.

Restoration would include, but not be limited to:

- Removal of all existing wall finishes with the exception of the brick clad walls and installation of a new rainscreen wall system.
- Repair of all deteriorated elements.
- Detailing all bay windows using current standards of practice and installation of new unitized vinyl-framed units (as per the 2001/2002 Restoration Program). If the windows in Suite 307A are replaced as an interim measure, they may not be able to be reused as they would not match the new unitized bay window system at Units 110 and 210 below.
- Detailing all mansard roof and brick clad wall tie-ins using current standards of practice.

RJC has already presented an estimated opinion of probable cost to the Strata Council for this remediation. Refer to email correspondence sent to Strata Plan NW2050 on July 21, 2009 (included for your convenience in Attachment A below).

#### 4.0 CLOSING COMMENTS

This report was prepared for Strata Plan NW2050. It is not for the use of benefit of, nor may it be relied upon, by any other person or entity, without written permission of RJC.

We trust the information contained within this report satisfies your current requirements. Should you have any comments, questions or concerns, please contact the undersigned.

Yours truly,

Read Jones Christoffersen Ltd.

Clegnes, Crystal Wegner, A.Sc.T, CCCA, LEED AP

Project Technologist

CW/

# ATTACHMENT A

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## **Crystal Wegner**

From:

Crystal Wegner

Sent:

July 21, 2009 4:24 PM

To:

'nw2050'

Subject:

RE: Cypress Point - North Elevation of Building A

Attachments: 1236\_001.pdf

Corinne, as requested, below is an estimated opinion of probable cost to remediate the north elevation of Building A. I have broken out the cost of the balcony stack so that the Strata can see the probable cost for the remaining walls and windows. I have also attached an elevation drawing which graphically represents the areas included.

Table 1 - Recommendations for Remediation		Option - Cost (\$Can) North Elevation of Building A
Restore 1 balcony stack on the north elevation of Building A (between Gridlines C1-D). Includes removal of cladding at base of exterior building walls only.		\$26,700
<b>Restoration Allowance</b> for repair of balcony and guardrail wall framing (20% of above cost).		\$5,340
Restore the north elevation of Building A (between Gridlines D-F). Includes a Restoration Allowance of \$9,000 for repair of wall and mansard roof framing (actual costs will depend on extent of deterioration of wood-framing).		\$61,900
	Opinions of Probable Cost SUBTOTAL	\$93,940
	Contingency Allowance (10% of Subtotal)	\$9,394
	Estimated Consultant Fees (10% of Subtotal)	\$9,394
	SUBTOTAL	\$112,728
	GST (5% of SUBTOTAL)	\$5,636
	TOTAL PROBABLE COST	\$118,364

As with the previous opinions of probable cost presented by RJC, the above cost is presented to provide an expectation as to the magnitude of costs required to complete the remediation work. The Opinion provided is based on conceptual repair methods, recently obtained broad unit rates, and past experience with similar projects. A detailed estimate of costs has not been provided, as it would require the preparation of plans, details, specifications and schedules to achieve a quantified summary of estimated costs.

## Regards,

Crystal Wegner, A.Sc.T, CCCA, LEED AP Project Technologist

Read Jones Christoffersen Ltd. Innovative thinking. Practical results.

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From: nw2050 [mailto:nw2050@telus.net]

21/07/2009